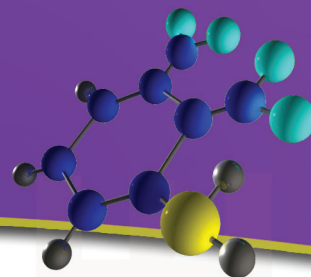




PROVIDENCE HEALTH & SERVICES
CATHOLIC HEALTH INITIATIVES

TEST UPDATE

Lawrence M. Killingsworth, Ph.D., DABCC, Chief Science & Technical Officer



ImmunoCAP[®] Specific IgE Testing: Objective Evidence Aids Diagnosis & Treatment Decisions

Quick Facts

- ▶ **Almost 40% of Americans suffer from allergies.**
- ▶ **Up to 70% of patients being treated with allergy related drugs are not allergic.**
- ▶ **NIH recommends identifying allergen exposures for asthmatic patients. ImmunoCAP's quantitative specific IgE testing identifies those allergy triggers.**
- ▶ **ImmunoCAP markedly improves clinical sensitivity and specificity of allergen-specific IgE testing.**
- ▶ **We offer Respiratory Disease Profiles specific to each region of the U.S., as well as a broad menu of additional panels and individual allergens.**
- ▶ **It is recommended that a total IgE be ordered when requesting a battery of allergens or respiratory disease profiles.**

*For more information,
please contact your
local marketing representative.*

www.paml.com

CLINICAL APPLICATION

ImmunoCAP[®], a reliable assay for measuring allergen specific IgE, provides clinically relevant information to help health care providers differentiate allergy-like symptoms from true allergies. It also has an important role in the identification of allergy triggers in patients diagnosed with asthma. Accurate and sensitive specific IgE test results helps differentiate patients who can be managed in primary care from those requiring referral to specialists.

- **Primary Care** - ImmunoCAP can be a powerful tool for the primary care physician in evaluating patients who present with rhinitis, sinusitis or other allergic symptoms. When added to the traditional methods of history and physical exam, ImmunoCAP can add objective data on specific sensitivities for either drug therapy or allergen avoidance. ImmunoCAP also offers solid evidence to rule out allergy.
- **Asthma** - Asthma overlaps many medical specialties. Primary care physicians, allergy specialists and managed care organizations all have an interest in controlling the morbidity associated with the disease and controlling the costs of treatment. Asthma treatment guidelines from the NIH state that clinicians should "identify allergen exposures." The use of ImmunoCAP, a well-standardized and reproducible blood assay, allows clinicians to meet this standard of care with relative ease.

CLINICAL BACKGROUND

Diseases with an allergic component represent a major public health problem in the United States, affecting as many as 40 to 50 million Americans.

- Allergic rhinitis affects between 10% and 30% of all adults and as many as 40% of children.
- 6.7% of adults and 8.5% of children have asthma; 60% and 90%, respectively, of those have allergy triggers.
- Food allergies affect approximately 6% of young children and 3 to 4% of adults in the US.

History and physical examination, when used alone without confirmatory testing, yield a correct diagnosis of allergic diseases only 50% of the time. Because allergy-like symptoms have a host of allergic and non-allergic etiologies, objective evidence has become increasingly important in primary care. With specific IgE blood test results, clinicians can make an assured differential diagnosis for patients with allergy-like symptoms. A reliable assay for measuring specific IgE supports the clinical diagnosis of allergy and helps guide the management of allergic diseases. Positive identification of allergens is essential before instituting environmental controls and helpful in selecting medication. Equally important, negative results avoid unnecessary, ineffective, and costly treatment.

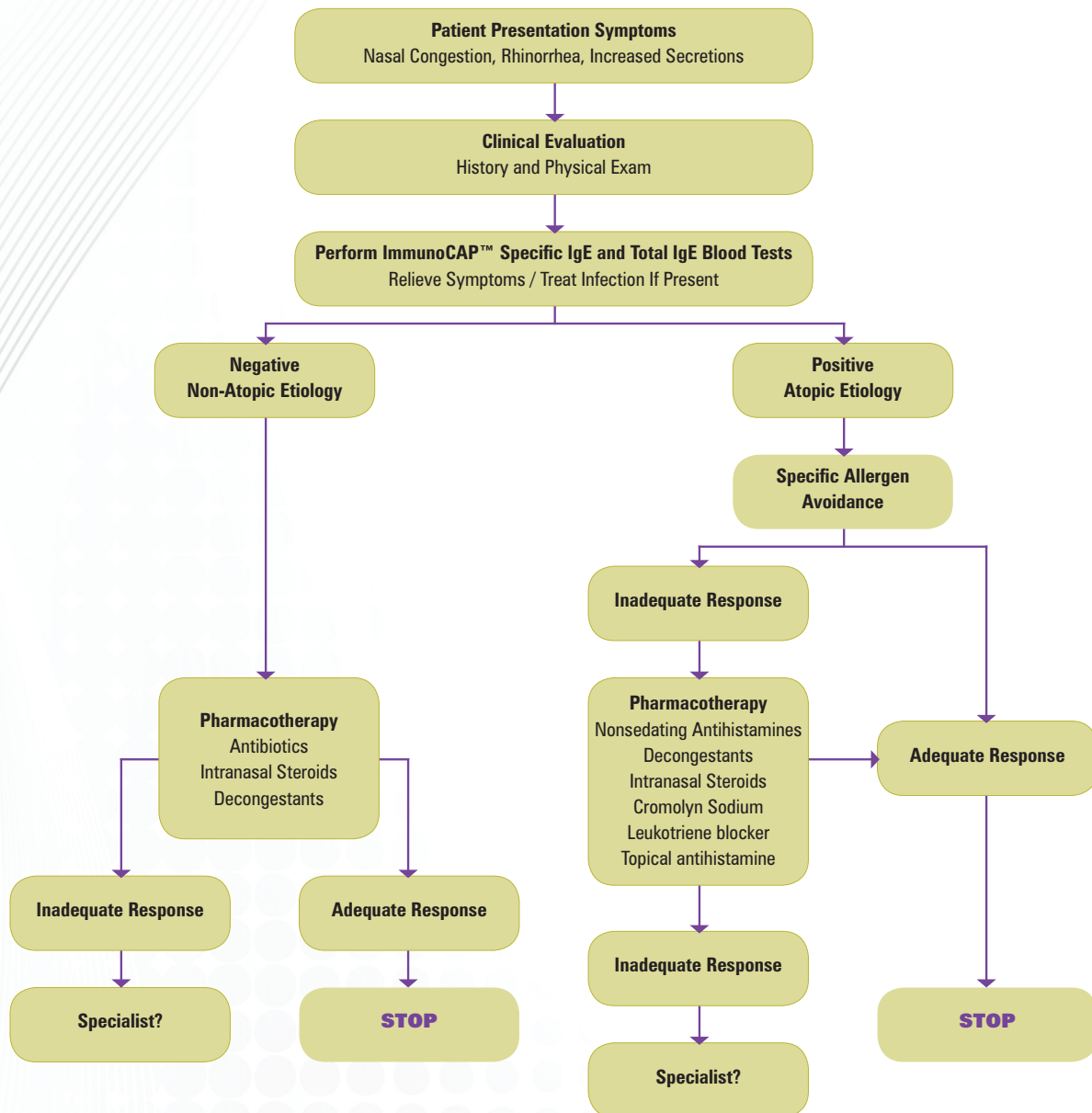
The American public is more aware of health issues and individuals are taking a more active role in their own health care. This activist mindset, coupled with heavy advertising for allergy-related drugs such as Claritin,[™] Allegra,[™] and Zyrtec,[™] has led patient/consumers to demand that their physicians prescribe allergy medication. A recent study, however, showed that only about 30% of patients who presented with upper respiratory symptoms and believed they were allergic, were actually suffering from allergies. "Test before you treat" was the theme of several articles in the national press on this subject. Specific allergen testing not only makes for good medical practice by prescribing anti-allergy drugs only for those patients who are allergic, but it could also help to reduce the cost of medical care.

TECHNICAL INFORMATION

ImmunoCAP®'s solid phase fluorescence enzyme immunoassay (FEIA) technology uses monoclonal antibodies to provide improved sensitivity and improved reproducibility. Tests use calibrators tied directly to the World Health Organization Reference Preparation for IgE (75/502) to deliver truly quantitative measurements of IgE.

Quantitative results are reported with a range from <0.10 to >100. Correlated ASM classes from 0 – 6 are also included on the report. We offer Respiratory Disease Profiles specific for each region of the United States. These panels are aimed at ruling in or ruling out specific allergies as the cause of a patient's upper or lower respiratory disease symptoms. Additional panels as well as a broad menu of individual allergens are also available. Please consult our Test Directory for a complete up-to-date list of our offerings.

Upper Respiratory Disease Patient Management



Selected References

1. Airborne allergens: Something in the air. National Institute of Allergy and Infectious Diseases. NIH Publication No. 03-7045. 2003.
2. The Diagnosis and Management of Rhinitis: An Updated Practice Parameter. Joint Task Force on Practice Parameters. J Allergy Clin Immunol. 2008; 122: S1-S84.
3. Nathan RA. The burden of allergic rhinitis. Allergy Asthma Proc 2007;28:3-9.
4. Homburger HA. Diagnosing allergic diseases in children. Arch Pathol Lab Med. 2004;128:1028-1031.

TEST INFORMATION

ALLERGEN, SINGLE (See accompanying list for specific single allergens.)	
DESCRIPTION	ALLERGEN, SINGLE
METHOD	FEIA
CPT CODE	86003
SPECIMEN REQUIREMENTS	0.5 mL serum (red-top tube). Separate serum from cells and put in separate plastic tube. Store and transport refrigerated.
COMMENTS	Minimum volume: 0.25 mL Stability: 24 hours at room temperature, 1 week refrigerated, 1 year frozen.
SCHEDULE	Monday – Friday
TURNAROUND	1-3 days
RANGES	LT 0.35 kU/L

ALLERGEN BATTERIES (See accompanying list for batteries and components.)	
DESCRIPTION	ALLERGEN BATTERIES
METHOD	FEIA
CPT CODE	86003 for each allergen
SPECIMEN REQUIREMENTS	Separate serum from cells and put in separate plastic tube. Store and transport refrigerated. (See individual batteries for volumes.)
COMMENTS	Stability: 24 hours at room temperature, 1 week refrigerated, 1 year frozen.
SCHEDULE	Monday – Friday
TURNAROUND	1-3 days
RANGES	LT 0.35 kU/L

IMMUNOGLOBULIN E, TOTAL (IGE)															
DESCRIPTION	IMMUNOGLOBULIN E, TOTAL (IGE)														
ORDER CODE	IGEC														
METHOD	FEIA														
CPT CODE	82785														
SPECIMEN REQUIREMENTS	1.0 mL serum (SST) Separate serum from cells and put in separate plastic tube. Store and transport refrigerated.														
COMMENTS	Stability: 8 hours at room temperature, 7 days refrigerated, 6 months frozen														
SCHEDULE	Monday – Friday														
TURNAROUND	1-3 days														
RANGES	<table border="0"> <thead> <tr> <th>IgE</th> <th>kU/L</th> </tr> </thead> <tbody> <tr> <td>0-11 mo</td> <td>1.4-52.3</td> </tr> <tr> <td>1-4 yrs</td> <td>0.4-351.6</td> </tr> <tr> <td>5-10 yrs</td> <td>0.5-393.0</td> </tr> <tr> <td>11-15 yrs</td> <td>1.9-170.0</td> </tr> <tr> <td>16+ yrs</td> <td>0.0-158.0</td> </tr> <tr> <td colspan="2">Minimum detectable concentration is 2.0 kU/L</td> </tr> </tbody> </table>	IgE	kU/L	0-11 mo	1.4-52.3	1-4 yrs	0.4-351.6	5-10 yrs	0.5-393.0	11-15 yrs	1.9-170.0	16+ yrs	0.0-158.0	Minimum detectable concentration is 2.0 kU/L	
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Single Allergens

DRUGS

ICDRP Penicilloyl G IgE

DUST MITES

ICDM2 D. farinae (mite) IgE

ICDM1 D. pteronyssinus (mite) IgE

EPIDERMALS & ANIMAL PROTEINS

ICECE Cat dander IgE

ICECD Cow dander IgE

ICEDD Dog dander IgE

ICEGF Goose feathers IgE

ICEHH Horse dander IgE

FOOD

ICFAL Almond IgE

ICFAP Apple IgE

ICFAVO Avacado IgE

ICFBN Banana IgE

ICFBA Barley IgE

ICFBF Beef IgE

ICFBPP Bell Pepper/ Paprika IgE

ICFBM Blue Mussel IgE

ICFBZ Brazil Nut IgE

ICFBR Broccoli IgE

ICFCA Carrot IgE

ICFCS Casein IgE

ICFCW Cashew nut IgE

ICFCEL Celery IgE

ICFCC Cheese, cheddar type IgE

ICFMC Cheese, mold type IgE

ICFCHE Cherry IgE

ICFCK Chicken meat IgE

ICFCH Chocolate/cacao IgE

ICFCL Clam IgE

ICFCOC Coconut IgE

ICFCD Codfish (whitefish) IgE

ICFCN Corn (maize) IgE

ICFCM Cows' milk IgE

ICFCR Crab IgE

ICFEW Egg white IgE

ICFEY Egg yolk IgE

ICFEG Egg (whole) IgE

ICFGA Garlic IgE

ICFGT Gluten IgE

ICFGR Grape (raisin) IgE

ICFHZ Hazel nut (filbert) IgE

ICFKIW Kiwi IgE

ICFLEM Lemon IgE

ICFLE Lettuce IgE

ICFLB Lobster IgE

ICFML Malt IgE

ICFMAN Mango IgE

ICFMS Mustard IgE

ICFOT Oat IgE

ICFON Onion IgE

ICFOG Orange IgE

ICFOY Oyster IgE

ICFGP Pea, green IgE

ICFPCH Peach IgE

ICFPN Peanut IgE

ICFPR Pear IgE

ICFPE Pecan nut IgE

ICFPA Pineapple IgE

ICFPIS Pistachio IgE

ICFPK Pork IgE

ICFPT Potato (white) IgE

ICFRC Rice IgE

ICFRY Rye IgE

ICFSA Salmon IgE

ICFSC Scallop IgE

ICFSS Sesame Seed IgE

ICFSH Shrimp IgE

ICFSB Soybean IgE

ICFSP Spinach IgE

ICFST Strawberry IgE

ICFTM Tomato IgE

ICFTU Tuna IgE

ICFTR Turkey meat IgE

ICFWL Walnut IgE

ICFWM Watermelon/honeydew IgE

Single Allergens *continued*

ICFWT	Wheat IgE
ICFWB	White/navy bean IgE
ICFBY	Yeast (bakers' or brewers') IgE

GRASSES

ICGBM	Bermuda grass IgE
ICGBR	Brome grass IgE
ICGJO	Johnson grass IgE
ICGKB	Meadow (Kentucky blue) grass IgE
ICGMF	Meadow fescue IgE
ICGCO	Oat cultivated IgE
ICGOG	Orchard grass (Cocksfoot) IgE
ICGPR	Perennial rye grass IgE
ICGBG	Bentgrass IgE
ICGSV	Sweet vernal grass IgE
ICGTM	Timothy grass IgE

HOUSE DUST

ICHDG	House dust (Greer) IgE
ICHDS	House dust (Hollister-Steir) IgE

INSECTS and VENOM

ICICR	Cockroach IgE
ICIH B	Honeybee venom IgE
ICIPW	Paper wasp venom IgE
ICIWF	White-faced hornet venom IgE
ICIYF	Yellow-faced hornet venom IgE
ICIYJ	Yellow jacket venom IgE

OCCUPATIONAL

ICOLT	Latex (Brazilian rubber tree) IgE
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MOLDS

ICMAL	Alternaria tenuis (alternata) IgE
ICMAF	Aspergillus fumigatus IgE
ICMAN	Aspergillus niger IgE
ICMPU	Aureobasidium pullulans (Pullularia) IgE
ICMCA	Candida albicans IgE
ICMCP	Cephalosporium acremonium IgE
ICMCH	Cladosporium herbarum IgE
ICMHL	Helminthosporium halodes IgE
ICMMR	Mucor racemosus IgE
ICMPN	Penicillium chrysogenum IgE

TREES

ICTAC	Acacia tree IgE
ICTAB	American Beech tree IgE
ICTBR	Common Silver Birch tree IgE
ICTBE	Box elder IgE
ICTCW	Cottonwood IgE
ICTEL	Elm tree IgE
ICTEU	Eucalyptus (Gum) tree IgE
ICTAL	Grey alder tree IgE
ICTHZ	Hazel nut tree IgE
ICTRW	Japanese cedar IgE
ICTSY	Maple leaf sycamore tree IgE
ICTMC	Mountain cedar (Juniper) tree IgE
ICTML	Mulberry tree IgE
ICTOK	Oak tree IgE
ICTOL	Olive tree IgE
ICTPE	Pecan (White hickory) tree IgE
ICTWL	Walnut tree IgE
ICTWA	White Ash tree IgE
ICTWP	White pine tree IgE

WEEDS

ICWCB	Cocklebur IgE
ICWEP	English plantain (Ribwort) IgE
ICWFR	False ragweed IgE
ICWGR	Giant ragweed IgE
ICWGD	Goldenrod IgE
ICWKO	Kochia (Firebush) IgE
ICWLQ	Lamb's quarters (Goosefoot) IgE
ICWME	Rough Marsh elder (Povertyweed) IgE
ICWMW	Mugwort IgE
ICWNT	Nettle IgE
ICWPG	Pigweed IgE
ICWRT	Russian thistle (Saltwort) IgE
ICWSC	Scale (Lenscale) IgE
ICWSO	Sheep sorrel (Yellow dock) IgE
ICWRG	Short (common) ragweed IgE
ICWWR	Western ragweed IgE
ICWSG	Worm wood (Sagebrush) IgE

Batteries

PEDS11

ALLERGENS, PEDIATRIC 11

VOLUME 1.5 mL

MINIMUM 1 mL

Allergen, *D. farinae* (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Cows' milk IgE
Allergen, Peanut IgE
Allergen, Codfish (Whitefish) IgE
Allergen, Egg white IgE
Allergen, Wheat IgE
Allergen, Soybean IgE
Allergen, Cockroach IgE
Allergen, *Alternaria tenuis* (alternata) IgE

PDFF21

ALLERGENS, PEDIATRIC FOOD PROFILE 21

VOLUME 3 mL

MINIMUM 1.5 mL

Allergen, Barley IgE
Allergen, Banana IgE
Allergen, Yeast (bakers' or brewers') IgE
Allergen, Chocolate/cacao IgE
Allergen, Codfish (whitefish) IgE
Allergen, Cows' milk IgE
Allergen, Corn (maize) IgE
Allergen, Egg white IgE
Allergen, Pea, green IgE
Allergen, Orange IgE
Allergen, Oat IgE
Allergen, Pork IgE
Allergen, Peanut IgE
Allergen, Potato (white) IgE
Allergen, Rice IgE
Allergen, Rye IgE
Allergen, Soybean IgE
Allergen, Strawberry IgE
Allergen, Tomato IgE
Allergen, White/navy bean IgE
Allergen, Wheat IgE

FOOD 10

ALLERGENS, FOOD ALLERGY PROFILE

VOLUME 2.5 mL

MINIMUM 1.5 mL

Allergen, Egg white IgE
Allergen, Cow's milk IgE
Allergen, Codfish (whitefish) IgE
Allergen, Wheat IgE
Allergen, Corn (maize) IgE
Allergen, Peanut IgE
Allergen, Soybean IgE
Allergen, Shrimp IgE
Allergen, Walnut IgE
Allergen, Clam IgE

ADFP22

ALLERGENS, ADULT FOOD PROFILE

VOLUME 3 mL

MINIMUM 1.5 mL

Allergen, Beef IgE
Allergen, Yeast (bakers' or brewers') IgE
Allergen, Codfish (whitefish) IgE
Allergen, Chocolate/cacao IgE
Allergen, Clam IgE
Allergen, Cow's milk IgE
Allergen, Corn (maize) IgE
Allergen, Egg white IgE
Allergen, Garlic IgE
Allergen, Pea, green IgE
Allergen, Mustard IgE
Allergen, Orange IgE
Allergen, Pork IgE
Allergen, Peanut IgE
Allergen, Potato (white) IgE
Allergen, Rice IgE
Allergen, Shrimp IgE
Allergen, Soybean IgE
Allergen, Tomato IgE
Allergen, Tuna IgE
Allergen, Walnut IgE
Allergen, Wheat IgE

NUT6

ALLERGENS, NUT PROFILE 6

VOLUME 1 mL

MINIMUM .75 mL

Allergen, Almond IgE
Allergen, Cashew IgE
Allergen, Hazelnut IgE
Allergen, Pecan IgE
Allergen, Peanut IgE
Allergen, Walnut IgE

SEAFD7

ALLERGENS, SEAFOOD PROFILE

VOLUME 1 mL

MINIMUM .75 mL

Allergen, Codfish (whitefish) IgE
Allergen, Clam IgE
Allergen, Crab IgE
Allergen, Lobster IgE
Allergen, Salmon IgE
Allergen, Shrimp IgE
Allergen, Tuna IgE

VENOM5

ALLERGENS, HYMENOPTERA PANEL

VOLUME .75 mL

MINIMUM .5 mL

Allergen, Honeybee venom IgE
Allergen, Paper wasp venom IgE
Allergen, White-faced hornet venom IgE
Allergen, Yellow-faced hornet venom IgE
Allergen, Yellow jacket venom IgE

MOLD5

ALLERGENS, MOLD PROFILE 5

VOLUME .75 mL

MINIMUM .5 mL

Allergen, *Alternaria tenuis* IgE
Allergen, *Aspergillus fumigatus* IgE
Allergen, *Candida albicans* IgE
Allergen, *Cladosporium herbarum* IgE
Allergen, *Penicillium chrysogenum* IgE

Batteries *continued*

GRASS9

ALLERGENS, GRASS PROFILE

VOLUME 1.5 mL

MINIMUM .75 mL

Allergen, Redtop bentgrass IgE
Allergen, Bermuda grass IgE
Allergen, Brome grass IgE
Allergen, Meadow Kentucky blue grass IgE
Allergen, Meadow fescue IgE
Allergen, Orchard grass IgE
Allergen, Perennial rye grass IgE
Allergen, Sweet vernal grass IgE
Allergen, Timothy grass IgE
Allergen, English plantain (Ribwort) IgE
Allergen, Lamb's quarters (Goosefoot) IgE

WEED12

ALLERGENS, WEED PROFILE 12

VOLUME 1.5 mL

MINIMUM .75 mL

Allergen, Cocklebur IgE
Allergen, English plantain (Ribwort) IgE
Allergen, Kochia (Firebush) IgE
Allergen, Lamb's quarters (Goosefoot) IgE
Allergen, Rough marsh elder IgE
Allergen, Mugwort IgE
Allergen, Nettle IgE
Allergen, Short (common) ragweed IgE
Allergen, Russian thistle (Saltwort) IgE
Allergen, Scale (Lenscale) IgE
Allergen, Sheep sorrel (Yellow dock) IgE
Allergen, Pigweed IgE

TREE11

ALLERGENS, TREE PROFILE 11

VOLUME 1.5 mL

MINIMUM .75 mL

Allergen, Box elder tree IgE
Allergen, Grey alder tree IgE
Allergen, Common silver birch tree IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Hazelnut tree IgE
Allergen, Mountain cedar (Juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Olive tree IgE
Allergen, Walnut tree IgE

ISCRN9

ALLERGENS, INHALANT 9

VOLUME 1.5 mL

MINIMUM .75 mL

Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Perennial rye grass IgE
Allergen, Alternaria tenuis IgE
Allergen, Elm tree IgE
Allergen, Olive tree IgE
Allergen, English plantain (Ribwort) IgE
Allergen, Short (Common) ragweed IgE

ISCN31

ALLERGENS, SCREEN 31

VOLUME 4 mL

MINIMUM 2 mL

Allergen, D. farinae (mite) IgE
Allergen, D. pteronyssinus (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Goose feathers IgE
Allergen, Horse dander IgE
Allergen, Bermuda grass IgE
Allergen, Johnson grass IgE
Allergen, Perennial rye grass IgE
Allergen, Timothy grass IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis (alternata) IgE
Allergen, Cladosporium herbarum IgE
Allergen, Acremonium kiliense IgE
Allergen, Setomelanomma rostrata IgE
Allergen, Penicillium chrysogenum IgE
Allergen, Acacia tree IgE
Allergen, Elm tree IgE
Allergen, Eucalyptus (Gum) tree IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Olive tree IgE
Allergen, Maple leaf sycamore tree IgE
Allergen, Walnut tree IgE
Allergen, English plantain (Ribwort) IgE
Allergen, Lamb's quarters (Goosefoot) IgE
Allergen, Mugwort IgE
Allergen, Pigweed IgE
Allergen, Russian thistle (Saltwort) IgE
Allergen, Sheep sorrel (Yellow dock) IgE
Allergen, Western ragweed IgE

ISCN36

ALLERGENS, SCREEN 36

VOLUME 5 mL

MINIMUM 2.5 mL

Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Goose feathers IgE
Allergen, Horse dander IgE
Allergen, Yeast (bakers' or brewers') IgE
Allergen, Cows' milk IgE
Allergen, Corn (maize) IgE
Allergen, Egg white IgE
Allergen, Egg yolk IgE
Allergen, Malt IgE
Allergen, Peanut IgE
Allergen, Soybean IgE
Allergen, Tomato IgE
Allergen, Wheat IgE
Allergen, Bermuda grass IgE
Allergen, Johnson grass IgE
Allergen, Perennial rye grass IgE
Allergen, Timothy grass IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis (alternata) IgE
Allergen, Cladosporium herbarum IgE
Allergen, Acremonium kiliense IgE
Allergen, Setomelanomma rostrata IgE
Allergen, Elm tree IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Olive tree IgE
Allergen, Maple leaf sycamore tree IgE
Allergen, Walnut tree IgE
Allergen, English plantain (Ribwort) IgE
Allergen, Lamb's quarters (Goosefoot) IgE
Allergen, Mugwort IgE
Allergen, Pigweed IgE
Allergen, Russian thistle (Saltwort) IgE
Allergen, Western ragweed IgE

* It is recommended that a total IgE be ordered when requesting a battery of allergens or respiratory disease profiles.

Respiratory Disease Profiles

RDPNA

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 1, NORTH ATLANTIC STATES

(CT, MA, NJ, NY, PA, VT, ME, NH, RI)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Box Elder tree IgE
Allergen, Common Silver Birch IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Maple leaf sycamore IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Walnut tree IgE
Allergen, White ash tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Mugwort IgE
Allergen, Pigweed IgE
Allergen, Sheep Sorrel (yellow dock) IgE

RDPMA

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 2, MID-ATLANTIC STATES

(DE, MD, VA, DC, NC)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Johnson grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE

Allergen, Alternaria tenuis IgE
Allergen, Box Elder tree IgE
Allergen, Common Silver Birch IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Pecan (white hickory) tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Pigweed IgE
Allergen, Sheep Sorrel (yellow dock) IgE

RDPGOV

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 5, GREATER OHIO VALLEY

(OH, TN, WV, KY)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Box Elder tree IgE
Allergen, Common Silver Birch IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Maple leaf sycamore IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Pecan (white hickory) tree IgE
Allergen, Walnut tree IgE
Allergen, White ash tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Russian thistle, IgE
Allergen, Pigweed IgE
Allergen, Sheep sorrel (yellow dock) IgE

RDPSC

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 6, SOUTH CENTRAL STATES

(AL, AR, LA, MS)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Box Elder tree IgE
Allergen, Common Silver Birch IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Pecan (white hickory) tree IgE
Allergen, Walnut tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Pigweed IgE
Allergen, Rough marsh elder IgE

Respiratory Disease Profiles *continued*

RDPNMW

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 7, NORTHERN MIDWEST STATES

(MI, WI, MN)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, *D. pteronyssinus* (mite) IgE
Allergen, *D. farinae* (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, *Penicillium chrysogenum/notatum* IgE
Allergen, *Cladosporium herbarum* IgE
Allergen, *Aspergillus fumigatus* IgE
Allergen, *Alternaria tenuis* IgE
Allergen, Box Elder tree IgE
Allergen, Common Silver Birch IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, White ash tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Russian thistle, IgE
Allergen, Rough marsh elder IgE
Allergen, Nettle IgE

RDPCMW

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 8, CENTRAL MIDWEST STATES

(IL, MO, IA)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, *D. pteronyssinus* (mite) IgE
Allergen, *D. farinae* (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, *Penicillium chrysogenum/notatum* IgE
Allergen, *Cladosporium herbarum* IgE
Allergen, *Aspergillus fumigatus* IgE
Allergen, *Alternaria tenuis* IgE
Allergen, Box Elder tree IgE
Allergen, Cottonwood tree IgE

Allergen, Elm tree IgE
Allergen, Maple leaf sycamore IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Pecan (white hickory) tree IgE
Allergen, Walnut tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Russian thistle, IgE
Allergen, Pigweed IgE
Allergen, Rough marsh elder IgE
Allergen, White ash tree IgE

RDPGP

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 9, GREAT PLAINS STATES

(KS, NE, ND, SD)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, *D. pteronyssinus* (mite) IgE
Allergen, *D. farinae* (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, *Penicillium chrysogenum/notatum* IgE
Allergen, *Cladosporium herbarum* IgE
Allergen, *Aspergillus fumigatus* IgE
Allergen, *Alternaria tenuis* IgE
Allergen, Box Elder tree IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, White ash tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Russian thistle, IgE
Allergen, Sheep Sorrel (yellow dock) IgE
Allergen, Nettle IgE

RDPSWG

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 10, SOUTHWESTERN GRASSLAND STATES

(TX, OK)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, *D. pteronyssinus* (mite) IgE
Allergen, *D. farinae* (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, *Penicillium chrysogenum/notatum* IgE
Allergen, *Cladosporium herbarum* IgE
Allergen, *Aspergillus fumigatus* IgE
Allergen, *Alternaria tenuis* IgE
Allergen, Box Elder tree IgE
Allergen, Common Silver Birch IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Pecan (white hickory) tree IgE
Allergen, White ash tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Pigweed IgE
Allergen, Rough marsh elder
Allergen, Sheep sorrel (yellow dock) IgE
Allergen, Nettle IgE

* It is recommended that a total IgE be ordered when requesting a battery of allergens or respiratory disease profiles.

Respiratory Disease Profiles *continued*

RDPRM

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 11, ROCKY MOUNTAIN STATES

(AZ [Mtn], ID [Mtn], NM, WY, CO, UT [Mtn], MT)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Grey alder IgE
Allergen, Box Elder tree IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Olive tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Mugwort IgE
Allergen, Russian thistle IgE
Allergen, Pigweed IgE
Allergen, Sheep sorrel (yellow dock) IgE

RDPAW

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 12, ARID SOUTHWEST

(S. AZ, SE CA DESERT)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Johnson grass IgE
Allergen, Perennial rye grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE

Allergen, Cladosporium herbarum IgE

Allergen, Aspergillus fumigatus IgE

Allergen, Alternaria tenuis IgE

Allergen, Acacia tree IgE

Allergen, Cottonwood tree IgE

Allergen, Elm tree IgE

Allergen, Mountain cedar (juniper) IgE

Allergen, Oak tree IgE

Allergen, Olive tree IgE

Allergen, Short (common) ragweed IgE

Allergen, Mugwort IgE

Allergen, Russian thistle IgE

Allergen, Pigweed IgE

RDPCS

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 13, SOUTH COASTAL CALIFORNIA

(CA)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Johnson grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Grey alder IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Olive tree IgE
Allergen, Walnut IgE
Allergen, Short (common) ragweed IgE
Allergen, Mugwort IgE
Allergen, Russian thistle IgE
Allergen, Pigweed IgE

RDPC

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 14, CENTRAL CALIFORNIA

(CA)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Grey alder IgE
Allergen, Common silver birch tree IgE
Allergen, Elm tree IgE
Allergen, Maple leaf sycamore tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Olive tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Mugwort IgE
Allergen, Russian thistle IgE
Allergen, Pigweed IgE

Respiratory Disease Profiles *continued*

RDPIMW

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 15, INTERMOUNTAIN WEST

(SOUTH ID, NV)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Bermuda grass IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Box elder tree IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Mulberry tree IgE
Allergen, Oak tree IgE
Allergen, Olive tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Mugwort IgE
Allergen, Russian thistle IgE
Allergen, Pigweed IgE

RDPINW

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 16, INLAND NORTHWEST

(CENTRAL & EASTERN WA, OR)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Grey alder tree IgE
Allergen, Box elder tree IgE

Allergen Common silver birch tree IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Oak tree IgE
Allergen, Mugwort IgE
Allergen, Russian thistle IgE
Allergen, Pigweed IgE
Allergen, Sheep Sorrel (yellow dock) IgE

RDPCPN

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 17, PACIFIC NORTHWEST

(NW CA, WESTERN WA, OR)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Grey alder tree IgE
Allergen, Box elder tree IgE
Allergen Common silver birch tree IgE
Allergen, Cottonwood tree IgE
Allergen, Elm tree IgE
Allergen, Mountain cedar (juniper) IgE
Allergen, Oak tree IgE
Allergen, Walnut tree IgE
Allergen, White ash tree IgE
Allergen, Short (common) ragweed IgE
Allergen, Pigweed IgE
Allergen, Sheep Sorrel (yellow dock) IgE
Allergen, Nettle IgE

RDPKAK

ALLERGENS, RESPIRATORY DISEASE PROFILE, REGION 18, ALASKA (AK)

VOLUME 3 MI

MINIMUM 1.5 mL

Allergen, D. pteronyssinus (mite) IgE
Allergen, D. farinae (mite) IgE
Allergen, Cat dander IgE
Allergen, Dog dander IgE
Allergen, Timothy grass IgE
Allergen, Cockroach IgE
Allergen, Penicillium chrysogenum/notatum IgE
Allergen, Cladosporium herbarum IgE
Allergen, Aspergillus fumigatus IgE
Allergen, Alternaria tenuis IgE
Allergen, Grey alder tree IgE
Allergen Common silver birch tree IgE
Allergen, Cottonwood tree IgE
Allergen, Mugwort IgE
Allergen, Sheep Sorrel (yellow dock) IgE

* It is recommended that a total IgE be ordered when requesting a battery of allergens or respiratory disease profiles.